Listing of Claims:

Claims 1-21 (Canceled).

Claim 22. (Currently Amended) A method of treating a human tumor in a patient in need of such treatment, said method comprising the steps of

sensitizing said tumor to radiation by administering to said patient 5-chloro-2'-deoxycytidine and tetrahydrouridine in ~~an~~ amounts effective to sensitize said tumor to radiation,

and exposing the patient to an effective level of radiation to treat said tumor,

wherein none of ~~PALA, FdC, 4-N-methyl FdC and FdU~~ N(Phosphonacetyl)-L-Aspartate (PALA), 5-Fluoro-2'-deoxycytidine (FdC), 4-N-methyl 5-Fluoro-2'-deoxycytidine (4-N-methyl FdC) and 5-Fluoro-2'-deoxyuridine (FdU) is administered to the patient.

Claim 23. (Previously Presented) The method of claim 22, wherein the tumor is selected from the group consisting of a tumor of the breast, lung, brain, liver, kidney, ovary, uterus, testis, pancreas, gastrointestinal tract, head and neck, nasopharynx, skin, and prostate.

Claim 24. (Currently Amended) The method of claim 22, wherein 5-chloro-2'-~~deoxycitidine~~ deoxycytidine and tetrahydrouridine are administered in a slow release formulation.

Claims 25-27. (Canceled)

Claim 28. (Previously Presented) The method of claim 22, wherein said patient is a human.

Claim 29. (Currently Amended) The method of claim 22, wherein the radiation is selected from the group consisting of radiation from protons as a radiation source, radiation from a radiation source implanted proximal to the tumor, ~~radiation from a radionuclide attached to monoclonal antibodies,~~ radiation in a gamma knife, 3D conformal radiation, and radiation in steriotactic radiosurgery.

Claim 30. (Currently Amended) The method of claim 28, wherein said radiation is from a radiation source comprising yttrium 90 needles or ~~indium~~ iridium needles implanted proximal to said tumor.

Claim 31. (Currently Amended) The method of claim 28, wherein said radiation is from yttrium 90 ~~attached to a monoclonal antibody~~.

Claim 32. (Currently Amended) A method of treating a human cancer patient, said method comprising the steps of

administering to said cancer patient 5-chloro-2'-deoxycytidine and tetrahydrouridine in ~~an~~ amounts effective to sensitize said cancer patient to radiation,

and exposing said cancer patient to an effective level of radiation to treat said cancer patient,

wherein none of ~~PALA, FdC, 4-N-methyl FdC and FdU~~ N(Phosphonacetyl)-L-Aspartate (PALA), 5-Fluoro-2'-deoxycytidine (FdC), 4-N-methyl 5-Fluoro-2'-deoxycytidine (4-N-methyl FdC) and 5-Fluoro-2'-deoxyuridine (FdU) is administered to the patient.

Claim 33. (Previously Presented) The method of claim 32, wherein said cancer patient is selected from the group consisting of a breast cancer patient, a lung cancer patient, a brain cancer patient, a liver cancer patient, a kidney cancer patient, an ovary cancer patient, a uterus cancer patient, a testis cancer patient,

a pancreas cancer patient, a gastrointestinal tract cancer patient, a head and neck cancer patient, a nasopharynx cancer patient, a skin cancer patient, and a prostate cancer patient.

Claims 34-38. (Canceled)

Claim 39. (Currently Amended) The method of claim 32, wherein the radiation is selected from the group consisting of radiation from protons as a radiation source, radiation from a radiation source implanted proximal to the tumor, ~~radiation from a radionuclide attached to monoclonal antibodies,~~ radiation in a gamma knife, 3D conformal radiation, and radiation in steriotactic radiosurgery.

Claim 40. (Currently Amended) The method of claim 38, wherein said radiation is from a radiation source comprising yttrium 90 needles or ~~indium~~ iridium needles implanted proximal to said tumor.

Claim 41. (Currently Amended) The method of claim 38, wherein said radiation is from yttrium 90 ~~attached to a monoclonal antibody~~.

Claim 42. (Currently Amended) The method of claim 32, wherein only 5-chloro-2'-~~deoxycitidine~~ deoxycytidine and tetrahydrouridine are administered to said cancer patient.

Claim 43. (Previously Presented) The method of claim 22, wherein said method sensitizes said tumor to radiation by a factor of at least about 3 fold as measured by comparing the effective dose of radiation to treat said tumor when said tumor is sensitized and the effective dose of radiation to treat said tumor when said tumor is not sensitized.

Claim 44. (Previously Presented) The method of claim 22, wherein said radiation is delivered in fractions.

Claim 45. (Previously Presented) The method of claim 22, wherein said tumor is metastatic.

Claim 46. (Previously Presented) The method of claim 22, wherein said tumor is a prostate tumor.

Claim 47. (Previously Presented) The method of claim 32, wherein said radiation is delivered in fractions.

Claim 48. (Previously Presented) The method of claim 32, wherein said patient is a prostate cancer patient.

Claim 49. (Previously Presented) The method of claim 22, wherein said tumor implicates hypermethylation.

Claim 50. (Previously Presented) The method of claim 22, wherein said tumor is selected from the group consisting of lung, rectum, breast, head and neck, brain, pancreas and cervix tumors.

Claim 51. (Previously Presented) The method of claim 22, wherein said tumor is selected from the group consisting of head and neck and pancreas tumors.

Claim 52. (Previously Presented) The method of claim 32, wherein said tumor implicates hypermethylation.

Claim 53. (Previously Presented) The method of claim 32, wherein said cancer patient is selected from the group consisting of a lung cancer patient, a rectum cancer patient, a breast cancer patient, a head and neck cancer patient, a brain cancer patient, a pancreas cancer patient and a cervix cancer patient.

Claim 54. (Previously Presented) The method of claim 32, wherein said cancer patient is selected from the group consisting of a head and neck patient and a pancreas cancer patient.

Claim 55. (Previously Presented) The method of claim 22, wherein said tumor implicates gene silencing.

Claim 56. (Previously Presented) The method of claim 22, wherein said tumor has elevated enzymatic activities of deoxycytidine kinase and dCMP deaminase in tumor cells compared with normal cells.

Claim 57. (Previously Presented) The method of claim 32, wherein said cancer patient is suffering from a tumor implicates hypermethylation.

Claim 58. (Previously Presented) The method of claim 32, wherein said cancer patient is suffering from a tumor implicates gene silencing.

Claim 59. (Previously Presented) The method of claim 32, wherein said cancer patient is suffering from a tumor with elevated enzymatic activities of deoxycytidine kinase and dCMP deaminase in tumor cells compared with normal cells.